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SUGGESTIONS

FOR A

SIMPLE SYSTEM OF DECIMAL NOTATION AND CURRENCY,

AFTER THE PORTUGUESE MODEL.

BY

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Suggestions for a Simple System of Decimal Notation and Currency, after the Portuguese Model. By JAMES ALEXANDER, Wine-Merchant, Edinburgh.*

Some change in our present complicated system of money notation and currency has long formed an object of desire to the mercantile community of this country. For although we are the most mercantile nation on the face of the globe, inasmuch that we have been not inaptly termed "a nation of shopkeepers," yet in this department of scientific reckoning we are not only confessedly behind almost every other European nation, but also far in arrear of the United States of America—an offshoot from our own stock. And now even Canada, one of our own possessions (but possessed in this particular of independent action), has already taken the start of us. From an object of desire this change has latterly become an object of expectation, for we are aware that certain steps have been taken towards it; but, like the deceitful mirage of the desert, the wished-for consummation seems to vanish from our longing eyes just as we think ourselves likely to reach it: in fact, we seem to proceed towards it by steps of strictly decimal progression. It is just about ten years since a parliamentary commission on the subject of weights and measures advised the adoption of a decimal scale in reference to them, but recommended, as a preliminary step, the previous decimation of the coinage, which was not properly before them; and it is only now, in the second decennial period, that we have had a Parliamentary Committee on the coinage and currency, whose report was presented at the close of last session. It is, at all events, refreshing to find that that committee has not shelved the coinage and currency for another decennial period, by recommending, in accordance with previous precedent, that the weights and measures should first be decimated; for the report undoubtedly directly recommends the decimation of coinage, currency,

* Read before the Society, 12th December 1853.

and accounts, and even points out, with some degree of distinctness, the mode in which the committee propose that this should be done, deduced from the evidence and recommendations of many eminently scientific men, who appear carefully to have considered the subject; but this further progressive step, giving *apparently* the hope of a speedy realization of our wishes, is to a great extent neutralized by a single sentence in the evidence of Sir J. W. Herschel, the talented master of the Mint, and one of the most important, if not the most important witness examined, who, after fully developing his *theory* of the important change, says, "I should feel disposed to assign somewhere about twenty years from its commencement, as a probable term for the completion of the process (meaning the process of transition) and the introduction of a totally new coinage. That is the idea I have of the way in which the new system might be introduced." In this idea as to time, Sir John is corroborated by other witnesses; and therefore I much fear that the question will arise with the present generation of mercantile men, Whether they will submit to the infliction of the many inconveniences which a change, however slight, in money matters necessarily entails, in order that their grandchildren may enjoy a better system of accounts, or whether they will not rather be inclined to "bear the ills (and the coins) they have, than fly to others that they know not of?"

The chief obstacle which appears to have appalled even the most strenuous advocates for a change, is the important fact, that "it is absolutely necessary that the greatest deference should be paid to existing circumstances, and that the present relative notions of value, so deeply rooted in the public mind, should be disturbed as *little as possible*;" and on this the very threshold of the question, the anomalous "pound sterling," and the much more ancient penny, stand arrayed in deadly feud; for it is held to be absolutely impossible, under the new system, that they can longer *co-exist*. The pound seems to have found most favour with the majority of the witnesses, who appear to regard the retention of it as the "unit of account" and of value as a *sine qua non*; and the committee have, therefore, done little more than hold the

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scales betwixt the pound and the penny, and have at length decided that the pound has the preponderance, and that the penny must "go to the wall." They appear, however, to be so sensible of the great difficulties which surround this part of the question, and the prejudice likely to be created among the great masses of the people, that they shrink from the responsibility of "closing the record," and qualify even their recommendation by saying: "An obstacle of so undefined a nature as a vague popular feeling, based upon habit and association, and not upon reason, cannot be dealt with on any general and abstract principle; and your committee, therefore, purposely abstain from seeking to fetter the executive on that part of the subject." In my humble opinion, this is tantamount to a leaving open of the entire question, for popular feeling and prejudice is the most important element to be dealt with in the matter, for which it is open to any one to suggest means of palliation, even from a different course of treatment to the one proposed. Now this simple change in the name and value of the present penny involves considerations of such magnitude, that just before the prorogation of Parliament one of Her Majesty's ministers stated that it was not to be thought of, or entered upon, without the most weighty deliberation. And I think, having regard to popular feeling, that he was right; the very name of the penny is enshrined in the affections of the people by the part which it bears in many a familiar saying and proverb. But besides this ideal attachment, a long array of tangible fixtures of value already present themselves against the change. Those in the van are marshalled by Government—penny-postage, receipt and newspaper stamps—statutory tolls and pontages—income-tax and railway mileage-rates—payment of troops, and customs duties; and these are followed by penny and threehalfpenny publications, and a long line of private interests,—an addition to which, upon slight consideration, will suggest itself to the mind of almost every tenth man in the community; added to this, the change is to fall, not upon the educated classes, who could best appreciate the advantages which it would bring about in another direction, but upon the masses of the people, whose prejudices it is much

easier to excite than to allay—that people whose ancestors, exactly a century ago, clamorously demanded back from the executive the eleven days of which they believed themselves to have been robbed by the change in the calendar—a belief which, in these latter times of intelligence and spreading knowledge, may be universally admitted to have been most irrational and absurd. But even where it excites a smile, is it not practically homologated, by the persistent adherence, in many districts, to what is termed the “Old Style,” in the fixing of terms of service, in such to the inconvenience of other districts, and while every annually recurring 1st day of January brings to the denizens of towns, and their immediate neighbourhood, cessation from toil, and the joyous feelings with which the commencement of every new year is hailed? In many country districts, this day is altogether overlooked, high holiday being held upon the 13th. In these days of cheap travelling, it is certainly a most anomalous sight for us citizens, just as we are beginning to settle quietly down, after our new-year’s festivities, with the chastened feeling that another year has many days since gone down the stream of time into the ocean of eternity, to find our streets paraded by bands of holiday-making country people, and on inquiring the occasion, to be told that “this is New Year’s day!” If this does not evince a still lingering belief in the justice of the cause of their last century predecessors, it at all events holds out an emphatic warning against any inconsiderate or violent interference with popular prejudices or predilections, no matter how evident, to those having the power of doing so, the advantages of the change may appear. Having, therefore, long had an idea of my own for changing the currency and accounts of this country to a decimal character, without the necessity of any violent change in the circulating coinage, while I shrink from placing myself in opposition to the systems developed by the many eminent men who have come forward on this important question, still believing, as I do, that for those on whom the ultimate responsibility of the change is to rest—while a Scylla boils on the one hand, in the proposed abolition of the present penny and its subdivisions, Charybdis is not far distant on the other, in the de-

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ferred hopes and expectations of the community—I think that a middle channel may be discovered, through which the currency bark, heavily laden though she be with the entire circulating coinage, may yet pass, with flowing sail, and without the aid of the screw, into a harbour of refuge, resulting ultimately in a shortened and successful voyage into the desired haven. Certain features of that channel were indeed pointed out to the committee, but they appear to have stopped at the very entrance, from a misapprehension of the direction in which it was to lead; and it is to prosecute that inquiry that the present paper is now, but still with considerable diffidence, presented for your consideration. On a matter of so very debatable a nature, it would be the height of presumption in me even to anticipate your approval; but I trust you will at least receive it with indulgence, as an humble contribution to the consideration of this important, and now much agitated question; and if it have only the effect of leading some of our more comprehensive minds to take up the matter, it will not have been made in vain.

The advantages of a decimal system of notation or statement of written accounts, over that which we now pursue, I need hardly state are very great, getting quit, as it would do, of our present complicated compound system, and enabling us to state all accounts in simple numerals, thus saving an immense amount of labour to our clerks, and in a great degree decreasing the liability to error. The subject, however, to my view at least, manifestly divides itself into two distinct branches, and I think that in the consideration of it, the not duly preserving this distinction has led to a considerable amount of complication. The keeping of money accounts in books, and the calculations necessary to do this correctly, and the actual handling, in payment or receipt of veritable coin, are in my opinion two almost totally distinct things, and the one only dependent in but a very slight degree on the other. Of the many thousands of clerks employed in keeping the records of our immense commerce, with the various ramifications of banking, &c., I should say that perhaps fully one half of them never see or handle a coin in connection with the accounts which they keep: it may be said that while

writing out these accounts, the actual money which they express is present to the "mind's eye;" but how far this is true may be judged from the fact, that in mercantile houses doing business with foreign countries, and the clerks in which must necessarily be acquainted with exchange transactions, you will find them talking as learnedly and familiarly of dollars and cents, kreutzers and stivers, ducats and roubles, as if they had circulated around them during the whole course of their existence—the truth probably being, in nine cases out of ten, that they not only never set eyes upon a single coin of any of these denominations, but had never been out of Great Britain in their lives. It will, therefore, appear, that in regard to the written records of our mercantile transactions, the greater bulk of which are effected without the actual passing of money, *it is not so much coins that we want, as a simple and easily manageable denomination of accounts.* It is no doubt of importance that, if possible, the coins in circulation should be as much in harmony with that denomination as possible; still, when it comes to the actual payment of money, one coin is just as good as another, *provided its specific value in the denomination in which accounts are kept be easily ascertainable*; and people are too much accustomed to look at both sides of a shilling to hand it over for less than its legitimate value. If the subject, therefore, divides itself to a certain extent into two distinct branches, the proposed systems of decimals also take two different directions—the one of progression, the other of retrogression, from a given point; and I have a strong idea of the ease with which the one system can be imparted to the minds of an uninformed public, in comparison with the other; just in proportion as a man acquires a thorough knowledge of the principles of construction of any fabric or piece of work which his own hands have reared, in comparison with taking to pieces the work of some other pair of hands, would, I think, be found the difference of the two systems, which, however, when attained to, are perhaps equally simple. We are not, however, to legislate for the *convenience* of those merely who have already, from education, acquired a knowledge of decimal computations, but for those who are as yet

entirely ignorant; and our primary object should be to place it before them in the simplest form. In our arithmetical teaching, multiplication always precedes division; when we commence a boy with arithmetic, we set him down to learning the table of numeral progression—"units, tens, hundreds," and so on; and he gradually acquires a knowledge of the immutable laws of the progression of numbers; but would he acquire the same knowledge in the same time if we set down on his slate, as a beginning, a figure 1 with half a dozen of ciphers after it, and told him "that was the expression of a million," and that by rubbing out the figure 1 and the cipher next to it, and again setting down the 1 in the deleted cipher's place, he would make it a hundred thousand, and so decreasing, step by step, till the figure 1 stood alone, as a simple numeral, and he is told *that it is now a unit*, would he not be much more apt to be mystified than instructed? How much more natural and easy would it be, first, to make him thoroughly comprehend what a *unit is*, and then a knowledge of the *ascending power* of numbers would speedily follow. I think, therefore, that in teaching a new system to a people, it is best to take any previous knowledge as little for granted as possible, and to stick as closely to elementary principles as we can.

Although the Parliamentary Committee have presented us with a goodly-sized Blue Book, I cannot help saying that I think there is very material evidence wanting, which, had it been brought out, would have been of the very highest value, in a proper consideration of the question. It will be observed, that almost all the evidence we have is *theoretical*; that is to say, that each witness simply develops his own theory of what he would propose as a system of decimals for this country, and only incidentally and generally are other countries and their systems alluded to. Now, decimal notation and currency, though still only a theory with us, is "a great fact" with the majority of other civilized nations, and I would therefore have desiderated at least one witness to develop particularly the systems of each country where the decimal system now obtains. There could have been little difficulty, I feel assured, in obtaining among the merchants of London wit-

nesses fully conversant with the monetary system of the respective countries with which they more particularly have mercantile relations, and who, probably from residence there, would have been enabled fully to expound the decimal systems of each, its circulating coinage, and nature of its subdivisions; its system of bookkeeping and accounts, and number of columns employed; its habits of oral enumeration of sums of money, and whether in these all the separate decimal gradations were preserved; its system of exchange with this country, and other important particulars;—a knowledge of all which could not fail to have been highly interesting, and a collation of which might have afforded us valuable materials for construction. We have now the term “experience” applied to insurance, investment, and other public companies, adopted, I suppose, to induce a belief that they have *profited* by the experience of all who have preceded them, and I think we would have found it an advantage to be in something like this position in reference to our proposed decimal system.

With these views, I purpose, to the best of my ability, to supply this deficiency of evidence in respect of one country with whose system alone I am at all conversant,—I mean Portugal; and whose simple decimal system of accounts I not only take as a model for our imitation, but venture upon the assertion that, with a simple change of denomination, and another superadded feature which I shall presently notice, it will be found analogous in almost every particular with our present circulating coinage in its sub-divisions. That I should, at this date, be at all able to expound the monetary system of Portugal, after an interval of twenty-two years’ absence from the country, without since having had the slightest practice in its accounts, will, I think, argue favourably for its simplicity, which, indeed, is borne testimony to in the evidence of Dr Bowring, whom I shall afterwards quote upon another point to which he does not appear to have paid *so much* attention. I went to Portugal in early youth for mercantile tuition, not long after my emancipation from the schoolroom; and have still a vivid recollection of the ease with which I fell into the system of money reckoning and ac-

counting. I cannot say that I even cast a thought upon its being decimal; I only knew that it was novel, and much easier than our own,—that, while our's was compound and perplexing, it was simple and perspicuous to a somewhat dull comprehension; and I am happy in having preserved my juvenile bookkeeping of current expenditure, which has served to revive my recollections.

The mode of keeping accounts in Portugal, then, is in *one simple denomination*, that of "rees" (literally "things"), and milrees, which of course merely mean thousands; but it is possessed of a feature appertaining, I think, to this country alone. The monetary system of all other countries is based upon some tangible and veritable coin, or expression of value, and therefore to the uninitiated a "ree" would at once be understood to be a coin; but there is actually no such coin in existence as a ree, the money denomination is entirely imaginary; and the lowest circulating coin, analogous in position, and nearly similar in value with our farthing, is of the nominal value of five rees. This principle may be characterized as an exceedingly cunning device, for it takes advantage of the decimal system of computation in the simplest form, and consists in just stamping the lowest circulating money value with the expression of the *decimal unit 5*, the effect of which is, that, in all money calculations, every sum ends in a cipher, except there be one or three farthings (so to speak) present, in which case it ends in 5; in fact, 5 being the lowest expression of value, and all the other coins or expressions of value being of necessity multiples of it, it is the only numeral of the whole 9 known in the monetary system of Portugal as a "simple number;" and the ease which it entails on all calculations will be appreciable by those who can recollect the easy and plain sailing through the fifth line of our multiplication table, after the difficulties of those previously encountered. It appears to me that the man who conceived this principle of the Portuguese monetary system (how long ago I am unable to say) is entitled to rank as the first professor of homœopathy. In this country we are wedded to the tangible and real; and the etymology of our farthing is "the fourth of a thing,"—that thing being the penny; but the

Portuguese has made his analogous coin to consist of five infinitesimal things, which he has not rendered palpable "to feeling or to sight," the beneficial effects upon the system from the "exhibition" of which (to use the professional term) are, however, much more easily demonstrable than those of the infinitesimal doses of the present day.

Under this imaginary denomination of account, then, Portugal has an ample array of circulating coins of various values, which I here place in juxtaposition with our own, to bring out the analogy. It will at once be understood that I do not adduce them as on a par of exchangeable value; for the legal tender in Portugal being one-half Government paper, which is always, unfortunately, at a considerable though fluctuating discount, the exchangeable value of the coins is thereby affected, but not the analogy of what coins are found *most convenient* as betwixt a decimal and a non-decimal country. The lowest circulating coin has assigned to it the nominal or imaginary value of—

	Written thus in Rees.	And	Analogous to our
5 rees	005 { the 960th part of a moidore		farthing
10 rees	010 half vintem		halfpenny
A vintem	020 { the 240th part of a moidore		penny
A half testoon	050 2½ vintems		proposed new cent of 2½d.
3 vintem piece	060		threepenny piece
Testoon	100		proposed doublecent of 5d.
6 vintem piece	120		sixpence
12 vintem piece	240 { or half crusado, the 20th of a moidore		shilling
Crusado novo	480 { 24 vintems, the tenth of a moidore		florin
Half moidore	2 400 pronounced "2 mil. 4"		half sovereign
A moidore	4 800 " " "4 mil. 8"		sovereign or pound.*

Accounts are all stated in books, &c., in rees and milrees, and kept in two columns, one for mils, the other for rees; and in bills and other documents, where no columns exist, a columnar sign || is placed betwixt the mils or thousands and hundreds of rees. I would beg to recommend the adoption of this,

* From this it will be seen that the number of farthings respectively in our own coins, multiplied by 5, exactly tally with the coins of Portugal.

at least, under any system we may fix on, as being much superior to a *simple decimal* point, which it is evident could easily be obliterated, and a figure either inserted in its place, or at either end of the sum, thus affording facilities for fraudulent alterations; but in the Portuguese system, as there never can be more than three figures to the right of the sign, vitiation of an amount on a bill or cheque is rendered more difficult; it is also the practice to place the sign Rs. immediately before the figures to the left of the sign || same as we now put £, and which answers the same purpose. Retail prices are quoted optionally, either in the denomination or in the distinctive names of the coins, generally the latter. To the question, "What is the price of such a thing?" would be answered, "three vintems," "a crusado," "two testoons," "half-a-moidore," "two moidores," and so on, just as we quote prices—as twopence, half-a-crown, two shillings, &c.,—and the ready registration of corresponding transactions in *rees* is, from practice, a matter of ease and speedily acquired. But what I here wish to draw particular attention to, is the fact, as will be seen from the above table, of the almost *exact similarity* which subsists betwixt our present supposed non-decimal coinage, and the decimal of Portugal, always keeping in view the before-mentioned feature of imaginary value. It will be seen that as our lowest expression of value is contained 960 times in our highest expression—a pound—so their lowest coin, five rees, is contained 960 times in the corresponding moidore, and so their two other copper coins, the half vintem and vintem, being the same multiples of their lowest coin, as our halfpenny and penny are of the farthing, so they are similarly contained 480 and 240 times respectively, both in the moidore and pound. Passing to the silver coins, it will equally be seen, that the crusado and half-crusado (corresponding to the florin and shilling), and respectively the tenth and twentieth of the moidore and pound, contain each twenty-four and twelve vintems and pence respectively. From this I think I am entitled to adduce the argument, that practice is better than theory, and that what has been done in one country can surely be done in Great Britain. Here, then, is a country which offers a model

for our imitation—a model, moreover, apparently exactly suited to the circumstances and relations of our already existing coinage.

But I do not mean to allow the advantages of the Portuguese system to rest upon my simple statement; hear Dr Bowring's testimony, (Evidence, No. 1525),—"I have been much in Spain and Portugal; and mention, as an example, that in Spain, in consequence of the absence of a decimal system, accounts are kept with considerable difficulty, and their correctness is seldom to be depended on. I had often occasion to see the perplexities and mistakes of the commissariat functionaries in Spain, during the Peninsular war, while just crossing the frontier into Portugal; where there exists a decimal system of coinage and account, inaccuracies were very rare, and all money operations recorded with great facility. I may also mention, in reference to the coinage of Spain, that as the different Spanish colonies emancipated themselves from the mother country, they every one, without exception, adopted the decimal system, and the universal adoption of that system has everywhere been recognised as a great benefit and blessing to the people. The system in Spain is as absurd and inconvenient as most of the other non-decimal systems. The accounts are kept in reals of vellon, every one of which represents 34 maravedis; *but it is less inconvenient than the English system, where the divisions are by 4, 12, and 20.*"

Alas! for the Doctor's perspicacity; little did he apparently dream that it was simply the *easily manageable denomination*, and not the *division*, that made the difference, and that the system he was so highly and justly lauding, and that he was so sweepingly condemning, were in this respect, so far as regards the coins, as nearly as possible identical: only see them in juxtaposition—

British.		Portugal.	
4 farthings	make 1 penny.	4 fivereis	make 1 vintem.
12 pence	... 1 shilling.	12 vintems	... 1 half-crusado.
20 shillings	... 1 pound.	20 half-crusados	... 1 moidore.
10 florins	... 1 pound.	10 crusados	... 1 moidore.

Nor have the Portuguese stood still in the onward march of improvement, for the Parliamentary Committee themselves

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bear testimony to their intelligence in this respect (*vide Rep. p. 4*),—"Your Committee are not aware of any instance in which a country, after adopting the decimal system, has abandoned it. The tendency, on the contrary, has invariably been in the direction of a further adoption of the system, the most recent instance being that of Portugal, where the mode of reckoning has long been based on the decimal system, and where a decree has been published, within the last few months, providing for the introduction of the French decimal metrical system of weights and measures."

Now it will be evident from these extracts, that Portugal is fully alive to the *improvement* of her system; and it may therefore be argued, that in passing to the weights and measures, she does not think her monetary system either susceptible of improvement, or requiring it; a fair inference from which is, that she has not found that large amount of (or indeed any) inconvenience from the relation of her existing copper coins to her higher expressions of value, which appears to have been erected into such a bugbear in this country. I am unable to say whether these coins were brought into existence with the decimal system, or were in previous circulation, but, at all events, there they now are, as the 240th and 480th and 960th parts of her moidore or pound, instead of the 250th, 500th, and 1000th parts, which seem to be considered a matter of such *absolute necessity with us*; and it may, I think, be assumed, that in the onward progress of that country to decimal perfection, (more especially as the will of the executive is *pretty nearly absolute*), this alteration would long ago have been made, if it had been considered *a matter of any moment*.

Having thus placed before you a living model, as it were, of a simple decimal system, I will now attempt to adduce some arguments in the light which it throws upon a much controverted point, and indeed the only point on which there is any room for argument, viz., as to what should, in a change to a decimal system, be our

UNIT OF ACCOUNT.

Putting it merely as a hypothetical suggestion, that if we could get the people to comprehend it, we might do worse

than adopt the Portuguese system of imaginary value, in which case our farthing would find an appropriate name as a "quintune," and the penny a "ventune," you will be quite prepared, from what has preceded, to expect, that I argue for the *retention of the present farthing* and penny without alteration, as the system least likely to give rise to jealousy or suspicion on the part of the people. In the adoption of the farthing unit, then, in antagonism to what is called the "retention of the pound as the unit of account," which is the proposition of the committee, and in which I am bound to say they are joined by most chambers of commerce, and other public bodies who have "pronounced" upon the question, it is utterly impossible to examine minutely the evidence in favour of the one, and *per contra* in condemnation of the other. The farthing unit only found one supporter before the committee, in the person of Mr Headlam, M.P., for Newcastle, whose system, of the advantage of which he expresses his strong conviction, still appears, so far as can be gathered from his evidence, to be based upon mere *theoretical opinions*. With this exception, the entire Blue Book is, I admit, against the system I now advocate; but it is a trite saying, that "an ounce of practice will at any time outweigh a pound of theory;" and having, so far as I can see, only *theory opposed to us*, we need not altogether despair of even yet attaining a preponderance in the scale. I must, in the first place, object to the phrase "retention of the pound as the unit of account," leading to the inference that other systems tend to the deposition of the pound from that highly elevated and respectable position. So far as I understand the English language, and the first principles of arithmetic, we have at present in our compound system no less than four, or at least three, "units of account;" we have units of farthings (in the character of fractions of the penny), units of pence, units of shillings, and units of pounds. The pound as the highest may, *par excellence*, be styled *the unit*, but I think we start fair as to position, and that the pound is no more a *unit* than the penny. Now it is simply to do away with this inconvenient *complication* of units that the decimal system has been at all brought forward; and it is of the very utmost importance that we should retain that through which

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we can most easily initiate (for that is the word) the great masses of the public into a knowledge of the system. I have a strong feeling that we will never be able to do this, *through "the pound,"* as the "*unit of account.*" It is all very well for thoroughly educated arithmeticians to expound a system which *begins* at the pound, and decimates it *downwards*,—to them it is an easy matter; but to the great mass of the people, the moment you set down a pound 1; and place a decimal point after it, you invest the whole matter with a *mystery* and *superstitious feeling*, which it is almost impossible to get over; and as for making them comprehend the value of a figure, by its *distance* from the decimal point, such as 1·5—1·02, it is my belief that you may as well "talk to them in Greek."

There is scarcely one of us who has not a very vivid juvenile recollection of the sort of mysterious awe with which we regarded "Decimals," as set forth in our arithmetical school-books, as, vexed with multiplication, doubly so by division, puzzled by the rule of three, and fairly demented by practice, we occasionally turned over to the *terra incognita* which lay beyond, to estimate what further trouble was in store for us; and the great body of the public are just in this very position. Somehow or other, our teachers, or arithmetical authors, have succeeded in investing the division of decimals with a *prestige of mystery*, from which all our efforts to effect its emergence will prove ineffectual. In the same position, I may say, stands the application of the term "*unit,*" *now proposed.* To an educated arithmetician, it may be and is as easy to descend decimally from unity, as to ascend; still the public will insist on ascribing to the term "*unit*" the meaning which all dictionaries of the English language give to it, viz., "the lowest number;" and that portion of the public who know little of arithmetic but the elements, will insist on its being "*the right hand number of any combination of simple numbers.*" Decimal division of unity, then, cannot be effected without the exhibition of the mysterious full decimal period; decimal progression from unity is the natural law of numbers, taught in the very first page of every school arithmetic book, of which it is the alphabet; it does not require the decimal point, but only the simple "*comma.*" to

mark the gradation to thousands, and it invariably results in the production of a *simple number*, which can be treated and spoken of as such, whatever *subsequent, quasi* "compound, character" may be given to it. Decimal division from unity, moreover, is principally resorted to to find a definite quantity out of an indefinite—to pursue fractional numbers of a given whole, *to any degree of minuteness*—in fact, into the realms of infinity, for which purpose it is carried on, "till it either terminate or repeat." But an *existing circulating coinage* is not in the position of an *indefinite* quantity. We have already, by almost common consent, terminated the decimal; we have ascertained the definite quantity, and thereby we procure a simple number, that is to say, if we eschew decimal points, and fill up each place in the account with a cipher, into which another figure is not found to fall. It would be our wisdom, in my humble opinion, to adopt this mode, if we expect it to take hold on the comprehension of the public, or conquer their prejudices. Our immortal Shakespeare has put into the mouth of one of the finest creations of his genius, as a dying request, the beautifully modest petition to be spoken of as he is—"Speak of me, I pray you," says Othello, "as I am—nothing extenuate or set down aught in malice." Might I respectfully parody this petition, in an appeal to our eminent philosophers, actuaries, and astronomers, who are so deeply read and continually working in the deeper arcana of arithmetical science, that they lose sight of the starting-point to speak of a decimal currency as *it is*, or, at least, may be—"Nothing complicate—or set down aught in mystery." Dr Bowring says, that in the columns of an account, it is much better that "the integer should be divided, than that the integer should be multiplied." His meaning here is rather obscure, seeing that if it result as it will infallibly do in a *simple number*, decimal division from the left is just decimal multiplication from the right; but I would desiderate the doing away with all columns but one, as a division betwixt the *thousands* and lower figures in the account. The proposal of the committee is to keep accounts in pounds, florins, cents, and mils, and to keep up from the very first both the columnar arrangement and denominational nomenclature. Taking thus the sum of £3, 15s. 7½d., and admitting the pro-

posed depreciation of the copper, it would be stated thus;—£3, 7*s.* 8*c.* 1*m.* The mode of division by which this is arrived at *mentally* will not, I think, be very obvious to those who have not given close attention to the subject; but after all, what has been arrived at? Stripped of its columns and denominational gradations, of which without violence you can denude it of *all but one*, it is nothing more than a simple number of mils or farthings. You may, indeed, in the denominational view, by “ringing the changes” on the various combinations of these, enunciate this amount orally in seven different ways, but there is only *one* way in which you are *absolutely shut up to state it*, and which you cannot by possibility ignore, and that is, just calling it *what it is*, “three thousand seven hundred and eighty-one mils or farthings,” or shortly (the lowest denomination being understood), “three mil seven hundred and eighty-one.” From this, then, will be evident the proposition which I started, that the keeping of accounts decimally in any country is simply stating them in cumulative amounts of the *lowest coin* in circulation. It may be startling at first, to our millionaires and merchant princes to be told, that henceforth the records of their wealth and great commercial operations must hereafter be kept in farthings—a coin which they have hitherto been accustomed to treat with contempt, and have studiously excluded from their books; but a little consideration will make it appear that this is *inseparable* from any decimal system that may or can be adopted. With these views, I propose that, as the first step in the transition, we simply reduce all sums in business-books, &c., into our present farthings, and then proceed in accordance with the Portuguese system—this being a mere change in the *denomination* of account without a change in value. It would not affect the terms or value of any pending contract, engagement, or obligation whatever, the number of farthings in which is just as easily ascertainable as the number of pounds or shillings; and proceeding, moreover, upon principles well known and recognised by the entire mercantile community, it would certainly not be necessary for the present generation to have nearly passed away before the change could come *fully into operation*. The principles of reduction and conversion of all our present denominations of account to

the lowest, and into one another, forms a very great portion of present scholastic arithmetical practice; and the correctness of the reduction of any sum into farthings, by the ordinary mode, can be thoroughly checked by another method, which I do not recollect being taught at school, but which I shall submit to you.* This change (as in the plan proposed by the committee) would require to be accompanied or preceded by the introduction of a new coin of the value of ten farthings, or $2\frac{1}{2}$ d., called by the committee a cent, (but a more appropriate name under *this system* might perhaps be found for it); adopting it, however, in the meantime, this "cent" is a necessity, and the double and quadruple would also be found a convenience; to the latter of which I would give the name of *Victoria*.

Let us now recur to our former example, £3, 15s. 7 $\frac{1}{2}$ d., which the proposal of the committee would convert into £3, 7f. 8c. 1m., and which by this system would appear as 3,631 farthings—a mere simple sum in the first instance, or 8||631, adopting the Portuguese sign for thousands. Now, though at *first sight* this sum of farthings does not appear to give any indications of the coins with which to pay it, and certainly does not, I admit, *throughout all its gradations*, yet it will be found that, supposing we have a new cent coin, the two lowest gradations will *always indicate correctly*, either with the present or depreciated copper coins, in any sum under 2s. or 2s. 0 $\frac{1}{2}$ d.,—thus relieving from all anxiety of calculation the transactions of the humbler classes up to this amount, and indicating in cents and farthings the coins necessary to discharge it—2s. 0 $\frac{1}{2}$ d. being equal to ||099, nine cents nine farthings, and the four per cent. of difference, up to this *mark*, falling on the unit only. The advantage of indication at sight, however, has I think been greatly *exaggerated*, and the difficulty of calculation without it, from being *merely theoretical, over-rated*. When accustomed by familiarity with the system, it is astonishing how the mind adapts itself to circumstances, and, in the first instance, the change could be aided by copious tables of conversion, such as I have appended to this paper.†

See Appendix, No. lii., p. 39.

† Ibid., No. i., p. 36.

But the difficulty which is now to be met is, that long accustomed to a higher integer of value in our anomalous expression "a pound sterling," than most other nations—although our brethren in America have long ago discarded it for the dollar, as their highest expression of account, value little more than a fifth, without, as the Committee's report states, "any inconvenience having appeared to attend the change,"—it is held to be repugnant to the feelings of the people of *this country* to express large amounts in a small denomination; and that if a man who wished to convey the information that he was worth £10,000, had to say that he was worth nine millions six hundred thousand farthings or mills, it would be utterly intolerable, and completely disturb or upset all our established notions of value; it is, therefore, held that the pound "is a British institution, so engrained into all our notions of value that it is impossible to oust it," and that any proposition to call a pound other than what it is, cannot be listened to. But I think this difficulty will vanish, if we can find a familiar and generally recognisable term for the expression of a thousand farthings, as a *new integer*, distinct from the pound or sovereign, but with a fixed relation to it, as the *unit* or *standard of value*, though not of account. To the suggestion of such a term I would now humbly lay claim. Before we got the pound sterling (at least in the form of the sovereign), we had a coin in this country which was the highest expression of value; as a coin it has long ceased to circulate, and taken its place in the collections of the antiquary; as a denomination of paper currency, it was found necessary to render it *illegal*, and no banker dare issue it "under a penalty of £20 for each offence;" notwithstanding all which, it is still clung to as an *expression of value* by certain professional classes, and even by the mercantile, in such payments as subscriptions, &c. Therefore, having tried all that we can, and unsuccessfully, to oust the "old guinea" from its hold on the affections of the country, not excepting the *dernier* resort of an Act of Parliament, I would now restore it to the full honours of circulation, as an expression of value for one thousand farthings or mills. At present it is unknown to commerce or banking.

and is a mere recognisable term for a sovereign and a shilling, or "one pound one;" and as the change would be no great one, and inflict no hardship or confusion, it cannot be doubted that the country would generally at once fall into its use, as an expression of the value we require for our decimal system, 20s. 10d. = 1000 farthings or mils. It will be observed that this would in no way interfere with the especial prerogative of the *sovereign*, which still remains the tangible standard of value, and circulates as a coin of the value of 960 farthings or mils. We merely, in the internal commerce of the country, disregard it, or rather do not employ it as a money of account, same as we at present disregard the crown-piece and other coins. It may be said that it would be necessary to give the guinea of 20s. 10d. an actual representation as a coin, but I cannot see that this is at all necessary; at present we have no difficulty in paying it when the sum is stated in that term, by laying down a sovereign and a shilling, and we should have as little difficulty with the depreciated guinea, if we got a quadruple cent or victoria, value 10d., which would exactly supply the necessary odds to the pound. I would say that the sovereign, as a British institution, remains entire in its hitherto material and political status; but it now requires the *superadded virtues* of the *victoria* to give it that domestic character which confers a blessing on the country. Those who are incorrigibly wedded to old habits, when asked for a guinea, can lay down the sovereign and the shilling as formerly; it will afford them an opportunity of generosity in the practical exercise of the phrase, "Never mind the coppers;" and they would have the satisfaction of entering it in their accounts as 1||008, instead of 1||000. We have, however, an efficient means of giving representation to the new guinea in our paper currency—for of course all bank paper would of necessity require to be issued in the denomination in which accounts are kept; and in Scotland there would be notes of one guinea or 1000 mils, and in Great Britain and Ireland notes of 5, 10, 20, 50, and 100 *guineas*, instead of *pounds* as at present. This change could easily be effected without inconvenience. Notes expressed in pounds, when paid into a bank, would not of

course be reissued; and a slight change in the hue of the paper would at once prevent any risk of confusion of guineas with pounds, until the latter were entirely withdrawn from circulation.

Having thus disposed of the units, tens, and thousands of our simple cumulative amount of farthings, it now remains to notice the intermediate gradation of hundreds; this would at present be *unrepresented* by an integral silver coin, and in paying it, or its half and quarter, we would require to add a penny to the florin, a halfpenny to the shilling, and a farthing to the sixpence. This is one of the inconveniences of the transition state; but, before the close of this paper, I shall adduce some considerations which, in my humble opinion, tend to show that these very coins are in course of applying the remedy to this inconvenience "*ex proprio motu*." In the transition state, I desiderate the keeping out of view the value of the coins, or their places in any sum, otherwise than as expressions of value for their respective amounts, of the denominational farthing or mil. In fact, accounts would simply be kept in guineas and farthings; and instead of, as in the other system, exciting the prejudices of the people by a change of value in the very coins with which they have been most familiar (and with a right conception of which, or the reasons for it, it would be next to impossible to impress them), the change, I advocate, would surely amount to the very slightest interference with their established habits and modes of reckoning. In drawing attention to the *advantages* of a decimal system, we have promised the people *simple* addition, subtraction, multiplication, and division, instead of *compound*; and this system would amply redeem the pledge. Calculations, and the modes by which results are arrived at, are essentially operations of the mind, almost every man having a different way from his neighbour of arriving at the same point. Over the mind few governments, even of the most despotic character, can ever acquire any effectual ruling power; but when the result of a mental operation comes to be stated on paper, here is a superadded feature with which a government can deal; we should therefore say to the people, "We have no desire violently to interfere with your established ideas of value, or

modes of reckoning; continue to think of, speak of, and handle the penny as the penny, and the shilling as the shilling, and the same with all the other coins with which you are familiar; we don't interfere with one of them; all we ask is, simply, that if you have occasion to set down any accounts on paper, state them in farthings, for the doing of which correctly we purpose to afford you every facility and information in our power." It would undoubtedly be an advantage if the value in farthings of each of the circulating coins could be impressed upon them; but as this may not easily be attainable, a government placard, exhibiting in conspicuous characters their several values, and to be for a time exhibited in every place of business, would answer every purpose; and these, with tables of conversion, would materially assist the transition.*

The sovereign, then, being left untouched, as the standard or measure of *value*, besides being available as a coin of 960 farthings, while accounts are kept in a simple denomination, easily referable to it, throughout every gradation or circulating coin, I humbly think the committee's objection, that the adoption of the farthing unit "would necessitate the withdrawal of the whole of the gold coinage," untenable. "Gold is our standard of value;" and if, as Sir John Herschel says, "we are lashed on to it," I do not say *we* should "kick in the harness;" but I equally dissent from his proposition, that we should meekly submit to all the "tossings" which it may choose to inflict on us. But gold is only the standard of value, by virtue of the rule of "measure for measure," and not from any absolutely inherent virtue in its appearance; in the sovereign, or pound sterling, most of us have daily painful experience of this fact, in the muletures to which we have to submit in banking offices, &c., when the too critical eye of the teller detects "abrasion," where we possibly never suspected it, or even if we did, were probably forced to wink at it. Gold, then, is merely a given standard of *fixed value*, by which to estimate the fluctuations of all other property and commodities, and more especially coins. In the sovereign or pound, it only takes a convenient form of application to save trouble;

* See Appendix, No. II., p. 38.

for it is evident, that if it were possible in the daily transactions of life to deal with it in the form of *dust*, transactions could be discharged in the veritable standard itself, to the minutest fraction. To propound, then, that our fetters are so hopelessly riveted to the "pound" as to be a bar to all improvement, is to erect a constitutional sovereignty into a *despotism*.

But even the importance of the pound is surely overrated, when it is stated by the committee and witnesses that "it is the basis on which all our exchange transactions with the whole world rests, and any change in it would lead to infinite complication and embarrassment in our commercial dealings." Surely this has been taken too much as a matter of course. That the sovereign, as only *so much bullion* at a fixed market price, may be the medium of settlement of exchanges, I admit; but it is so solely because it is John Bull's "sovereign will and pleasure" that it should be so, and it is neither the habit nor the *interest* of payees to examine too critically or quarrel with the form in which amounts *receivable by them* are discharged, so that it be in a form of which they can beneficially avail themselves; and so long as this is the case, most parties are inclined, uncomplainingly, to put up with some trouble or inconvenience. That it is not, however, the *basis* upon which exchange transactions rest, one has only to look into the "course of exchange" to be convinced of, and to see, moreover, that *the present penny*, which the committee propose to change, is more the basis of exchange calculation than the pound. Paris, Rotterdam, Amsterdam, Hamburgh, Frankfort, Venice, and some others, exchange, indeed, as against the pound; but the United States, St Petersburg, Madrid, Lisbon, Oporto, Madeira, Gibraltar, Leghorn, Genoa, Malta, Naples, Palermo, and Rio Janeiro, perform their exchange calculations by the *present penny*, and therefore any change in it would equally introduce complication and confusion,—the balance on this point being much in favour of the retention of the penny. The pound is, in effect, "the British institution," which isolates us from other nations; and is, in fact, almost the only "British institution" which we cannot, *with confidence*, hold

up to the admiration and imitation of the world. A little investigation will show, that while the pound, and its *existing* decimal subdivisions in the present silver coins, do not, in almost any instance, sufficiently approximate in value as to be of any practical advantage either to our own people visiting foreign countries, or to foreigners visiting Britain, decimal multiples of our present farthing and penny will be found in almost all countries to converge at *some one point* or *representative coin* to a proximate value, sufficient for all the practical purposes of travellers. On the principle which I have endeavoured to lay down, that a decimal currency can only be built upon the foundation of the lowest circulating coin, the pound would be neither more nor less, in money accounts, than a convenient integral expression for a thousand depreciated farthings, just as a guinea would be for a thousand of the present. Our currency is in the state of an unfinished building, of which the foundation is laid; and the question is, In what style is it to be finished? The present foundation will do for a graceful Grecian superstructure, which will harmonize with the surrounding architecture; to rear a Gothic one, would require the cutting down the proportions, or paring away the sides, of the already existing basement; and to do so would be "Gothic" in the *fullest sense of the term*. But there is a consideration to which I would humbly draw the attention of the architects of this *Gothic* building, and to which I think they would do well to look narrowly, before they proceed to any great length with the superstructure. Will they not be in danger of finding that the materials with which they build are not so solid and unchangeable as they imagined; that while the tear and wear of time generally makes all building materials of *less bulk*, it is likely to be the reverse with the materials they employ; that the pillars of their building, which are already prepared in the *present silver coins*, are even now showing symptoms of a disposition to *swell out* beyond the proportions in which they proposed to lay them, and that, at no distant period, it requires no prophet to foretell that unless repairs are made, the building will fall to pieces, and utter confusion be the result. To drop metaphor, I think it is only necessary to look to the present aspect of

the bullion market of the world to see, that though Sir John Herschel, the master of our Mint, concludes, that "we must stick to the pound," the present silver coins which he proposes to take along with him in his adhesion are pretty plainly saying to him, "You may do as you like, but we shall not bind ourselves to anything of the kind; we have been long fettered to the sovereign, but now we are about to take independent action." I allude to the effect which is to be had upon our silver currency by the immense, and still apparently increasing, influx of gold, our sole standard of value be it remembered, which has lately poured like a flood on the markets of the world, from the recent discoveries in our own colonies and other quarters of the globe. Gold is coined in this country at its *bullion* value,—that is to say, that the Mint makes no charge for turning it into coin. If you take an Australian nugget to the mint, they will not only give you back its exact weight in sovereigns, but will also make allowance for the alloy which it has been necessary to put into these sovereigns to allow of their being minted, so that you get in coin to the value of the last grain of gold.

With the silver coinage, however, it is different; on it, a seignorage is charged by Act of Parliament, amounting to about six per cent., I believe, and this takes the form of depreciation of the coin; so that if you were to take 100 ounces of standard silver to the Mint to be coined into crown pieces, they would give you back 100 crowns, but they would keep as much of the silver back as would form six additional crowns. This seignorage is necessary, not only for the purpose of defraying the expenses of the Mint, or making the business of coining bear its own charges, as every business should do, with a profit besides, but the depreciation is absolutely essential, to prevent the circulating medium from becoming merely a great store-house of silver bullion, from which silversmiths could at any time draw supplies necessary for their trade, by merely melting down the requisite number of coins. They have been unable to do this for the last ten years, except at a loss, because the average value of silver being 5s. per ounce, the actual coin, though nominally of this value, does not come up to it by six per cent. Silver bullion for the last ten years has averaged 59½ per ounce, never hav-

ing fluctuated more than a halfpenny or three-farthings, either above or below the 5s., so that the seignorage has prevented our coins from, being melted or sold as bullion to any great extent. But how if silver rises by a considerable percentage in the marketable value, in relation to that by which all value is estimated, namely, gold?—it will be obvious that it just raises the coin in value as a coin, for it may both obliterate the seignorage, and acquire over and above an additional value as bullion. Now, it is only necessary to look at the present aspect of the bullion market to see that the seignorage is already almost obliterated—silver, in bars, appears quoted in the *Economist* of 26th November, at 5s. 2½d. per ounce, with every appearance of permanence. What, then, is to be the result, if this continue or increase? Simply that the relation of the silver coins to the *sovereign* must of necessity alter.*

It may be said that this is a delicate point to moot, and that mixing up decimal coinage with a question of currency is likely to put off its adoption to the "Greek kalends;" but though quite aware of its delicacy, I think it is a question which cannot long be shirked, and, in the solution of which, I see the best means of introducing a thorough decimal system. It will be observed that under *any* new system, the executive is required to issue a new silver coin of 2½d., whether of old or new pence, and I propose its double and quadruple. The question, then, will inevitably arise, How are these new coins to be issued?—whether at the *present* or the *former* value of silver, in relation to which our present currency laws of mintage are established. It is not for me to anticipate the decision of the Chancellor of the Exchequer on this point—the present occupant of that important situation is far too acute to require any schooling from so humble an individual—but it occurs to me, that unless, like some flashy advertising traders, "he is determined to give the public every advantage which a large stock, laid in before the late serious rise in prices, will admit of," he will be unable, if the Mint seignorage is to be maintained, to supply them "below prime cost." If, then, the new coin or coins are to be

* See Appendix, No. v. p. 41.

issued at the present relation to the golden standard of value, it necessarily follows that they will not relatively harmonize with the florin, shilling, and sixpence, which are in a relation to the standard which will have passed away. What, then, is to be done in such circumstances? It would be no great stretch, while issuing the new coins at the proper relative value, in existing or shortly anticipated circumstances, to decree that, "in consequence of the rise in the value of silver, in relation to the gold standard, the florin, the shilling, and the sixpence shall be held as a legal tender respectively for 2s. 1d., 1s. 0½d., and 6½d.; and if it be conceded that this or some such measure would require to be resorted to, at any rate on the emergence of such circumstances, even if we were not thinking of a new decimal system at all, it will be seen that with the new coin of 2½d., or 10 farthings, and the appreciation of the florin to 2s. 1d., or 100 farthings, we would construct a *perfect* decimal system, *indicating*, in all the *gradations*, the coins with which to pay, with a familiar integer in the new guinea. I would not accord the same appreciation, of passable value, to the crown, the half-crown, the fourpenny, or the threepenny piece, which are somewhat incompatible with the decimal system; but these would not long continue to complicate the circulation; for in addition to these being called in and made exchangeable at the Mint, every silver-smith, from the increase of value of silver, would for the purpose of withdrawal, be in effect an agent of the Mint, as the melting process would be brought to bear on those coins only which were not appreciated; and the coins necessary to our circulation would, instead of becoming bullion, continue the "tokens" which it is absolutely necessary they should be. I do not say that the difference of value would rest here, or can be tied down to this point, but at all events it would give us breathing space, and meet the present aspect of the matter. If silver continue to hold its present, or increase its relative value to our sole standard, there are only two ways of meeting it in the coinage—either by *appreciation* or *depreciation*; and as you cannot (as with the stroke of a magician's wand) at once withdraw an entire coinage from circulation, in the event of the latter of these being adopted, the conco-

mitant circulation of big and little florins, shillings, and sixpences, and the inconvenience which the necessity of narrowly examining every coin would entail on commerce, would be a serious evil; while as to *appreciation*, I would suggest whether a precedent may not be found in the Portuguese coinage, which I have taken for my model, and where silver coins will be found in circulation indelibly impressed with the value of 200 and 400 reis, but which *pass for* 240 and 480 without the slightest confusion. We may be upon the eve of changes of value, of which none of us ever dreamt, and in contemplation of even a chance of these, it appears to me that the farthing unit in a new decimal currency is the most rational system we could adopt; it is based upon an already *existing* value, of which there is little risk of our requiring to learn any *new idea*, and, secure in its simplicity, let the silver and gold "toss and tumble" over one another, to use Sir John Herschel's expression, as they may, they affect not our system of accounts. Reared on the firmly-grounded foundation of the *lowest* idea of value, to which the exigencies of our commerce require us to give a tangible expression (and practically knowing no other denomination), the records of our commerce and accounts would remain unaffected by the unstable waves of changing value which might roll further out, and the simple decimal denomination of farthings still maintain a correct expression of accounts, under any circumstances. I would respectfully suggest, also, whether it would not be expedient, if possible, to get quit of the term "pound," as a *money term* upon other grounds. If we succeed in getting our coinage and currency decimalised, we do not expect to *stop there*—the weights and measures must inevitably follow; and of the difficulties of a change in this particular, that to the imperial system, which has not yet, after an interval of 28 years, taken a proper hold on the country, is a foretaste; while in the weights you have at least two different values, of the confusing term "pounds," to deal with.

But I have propounded this system of decimal notation and currency (with a mere "expression" for an integer) solely in deference to what I would take leave to call the

bigoted predilection of many for the sovereign *in statu quo*, who seem to think that it would be "impious sacrilege" to touch it. I have, therefore, called it throughout this paper "the standard of value;" but it is not the standard of value as the sovereign, but only as so much bullion; and if we find that our transactions would be more easily met or conveniently carried out by our having a larger piece of bullion at one time than another, why should there be such difficulty about giving it us? If the three most requisite silver coins are leaving the sovereign,—a departure which must either produce inevitable confusion in our present system of accounts, or necessitate a curtailment of the coins,—is there any reason why we should not change the one coin, and bring it up to the ratio?—that is to say, abolish the pound or sovereign altogether, and increase its value by four per cent., to meet both the silver and the most rational system of accounting, under the existing circumstances and relations of our coinage.

It appears to me that few people realize to themselves what the money which passes through their hands really is. Virtually all our transactions of payment, large or small, are only the passing of so much gold, just as much as if we carried a phial of gold dust in one pocket, and a pair of scales and weights in the other. Changing the *sovereign*, then, is a very different thing from changing the *standard* of value, which no government, to keep faith with the public or the public creditor, dare attempt. It would not, under a new decimal system, introduce anything like the change in "our ideas of value," which has been propounded. Parliament would only have to declare it "found, that contracts or obligations made and expressed in 'pounds,' were made and expressed in 'farthings,' at the rate of 960 to the pound sterling;" or otherwise, "that contracts expressed in 'pounds' were made and expressed in the gold standard of value, at 3738 farthings per standard ounce," and thus all current contracts and obligations would by a simple process of calculation be changed into the denomination in which accounts are kept without the slightest change of value. These, however, are mere speculations as to the future, and only in-

Suggestions for a Simple System of

dulged in to show that in adopting the "farthing unit" as the first important step in transition, we would adopt a system capable easily by progressive steps of being carried out to perfection on the emergence of possible, if not very probable, circumstances; but, on the contrary, if we take the pound, we not only, at the very outset, confuse and complicate all the transactions into which the present copper coinage enters as an element, but hopelessly yoke ourselves to a vehicle which will budge neither one way nor another.

Various other systems have been proposed, to which it is almost unnecessary that I should allude. They all strike off what is I think incorrectly called "the unit," at some *intermediate stage* betwixt the pound and the farthing—some of them being multiples of the farthing, and others dividends of the pound; but it is absolutely necessary, to harmonize with our present notions of value, or at least our habits of stating value, that we should have a high integral and familiar expression for a considerable amount, and which I think we eminently would have in "the guinea." The only advantage to compensate for a lower integer would be, that we could habitually descend *below the farthing*, in statements of value; but surely this is unnecessary, when we find from the evidence, that an expensive coinage of half-farthings has been for years lying at the mint disregarded and never inquired for. Some transactions indeed descend below the farthing, such as the biddings at cotton or wool sales, which are frequently made in 8ths, in 16ths, 32ds, and even lower fractions of the penny; these, however, being only intended to amount to *something tangible*, on a large parcel, and having no reference to the price of a single pound of cotton or wool, parties making them could without difficulty alter their system of bidding to tenths of a farthing, 5-10ths of a farthing being exactly the 8th of a penny. It is sufficient therefore to know, that these "ghosts of a value," if I may use the expression, are within the "vasty deep, and will come if we do call;" but in mercy to a superstitious and unenlightened public, do not let us parade them on the stage, in the very first act of the piece.

Having thus endeavoured to develop (perhaps at the risk

of being charged with tautology) a system of decimals for British notation and currency, not from *theory* but from *analogy*, recapitulation is almost unnecessary. Theorists may insist for a strictly indicating system, but they cannot fail to be struck with the fact, that the Portuguese (who have been so highly complimented for theirs) should not have taken advantage of it, in the very obvious direction of making their milree a *tangible* coin, instead of a mere ideal expression of value, especially as they have indicating coins below it of 100 rees in their "testoon" (and its half), and also in their half vintem or 10 rees; but unless matters are greatly changed, I think I will be corroborated by most of those conversant with the monetary circulation of Portugal, in saying, that the testoon and its half (indicating as they are) are just the silver coins *least used*, and that by far the greater number of prices, transactions, and payments, are made in *duo-decimal* multiples of the vintem coins of 3, 6, 12, and 24 vintems or pence, stated as 60, 120, 240, and 480 rees. Now, if the convenience of the Portuguese system arises from the adoption of 5 at the *unit* end of every sum, I consider that the converse convenience to us would arise from the adoption of a "thousand farthings" as an integral expression of value, and of an amount in accordance with our predilections, even without a corresponding coin, and retaining the duodecimal system below it, which seems so ingrained into the human mind as to be almost "impossible to oust it." It has been argued that, as we have made one step in a certain direction, by the issue of the florins, we should go on in the same direction. But it is scarcely a tenable argument, that if we have made one *false* step we should make another; and I therefore hope to see the next coin issued as the "Victoria," of ten *present pence*, and with it and a system of tables, the country would almost *volens volens* slide into a decimal system itself, with hardly a perception of its progress.

24 "Victorias" would change the sovereign;

25 "Victorias" would pay the new guinea;

5 "Victorias" would pay two hundred farthings;

10 four, 15 six, and 20 eight hundred;

and with very slight knowledge and calculation the lower

payments, for which, even without the cent, a multiplicity of coins admitting of all necessary combinations already exist, would soon arrange themselves in accordance with the system. Then surely the ease of transition is something in favour of this system ; and in this respect its advantage over the other cannot fail to be apparent. We have only to reduce all our present amounts and accounts to farthings, by a simple process known to every one, and " proceed as before," every separate item, if required to be so reduced, balancing with its *former* value, and making no difference in the aggregate or sum-total.

But it is evident that the change proposed by the committee, admitted to affect all *fiatures* of a pence value, will also operate the same change in all sums whatever, in business books or accounts, under twopence halfpenny, or their proposed new cent. Such sums are *fiatures of value* whenever they are recorded, and a fractional calculation would require to be gone into in each case, for conversion into the new denomination ; or rather, as the cent is a new coin adjusted to the change in the penny and farthing, would not such calculation necessarily apply to all *tails* of accounts under a florin, the lowest coin of account of the *present* denomination retained ? If accounts were all to be settled in the aggregate, it might be no very difficult matter of arrangement, betwixt debtor and creditor, which was to lose or gain the differential percentage on such small amounts ; but there is such a thing as a mercantile term of credit, and a large amount in the aggregate may be collected from debtors in many consecutive separate payments of distinct items of current account ; and a separate fractional calculation in such cases, so as to make the account ultimately balance (altogether irrespective of loss or gain to the parties) would be a matter *utterly intolerable*.

Nothing horrifies a merchant more, than the bare idea of having " a mess made of his books ;" and for this very reason fractions of the penny have hitherto been almost invariably excluded from them, even at the sacrifice of strictly correct calculation. In this respect, Government Departments set

different examples, the Customs repudiating the fractions, the Excise exacting *the uttermost*; but we have heard of merchants with whom the strictest accuracy to a very penny is matter of the most rigid and unbending principle, instituting a re-examination of the transactions of a whole year to discover an error of sixpence on one side of an account, simply upon the principle, that *if there be error at all*, there is no security that an error of sixpence on one side may not have arisen from one of £99, 19s. 6d. on the other. "A pretty mess" such commercial martinets and their clerks would get into in the transition conversion, and the throwing off or taking on the fractions in the tails of hundreds of separate accounts, which the plan of the committee would of necessity involve!

In conclusion, then, I would say, that were the farthing unit with the guinea integer adopted, the following supposititious paragraph in a Gazetteer, for instance, would convey all necessary information of our system. "In Great Britain money accounts are kept in farthings and guineas of one thousand farthings—various copper and silver coins are in use in the internal commerce of the country, which circulate at their respective values in farthings—but the standard or measure of value is the gold sovereign of a fixed standard of fineness, and of the value of 960 farthings, for which it also circulates as a coin. To this standard all the other coins or monies of account are referable, and in the sovereign all balances of exchange with other countries are settled." Most of you may, on some occasion, have seen a gentleman bargaining for the purchase of a horse, a house, or an estate, value from fifty to fifty thousand pounds. He makes an offer, less by some pounds than what has been asked. The seller looks contemplative for a little—at length a ray of animation overspreads his countenance—he seems to have discovered some mode of meeting the difficulty: "Make it guineas," he at length cries; and forthwith hesitation and doubt vanish, and the transaction is satisfactorily concluded. I feel that the same satisfactory solution would attend a similar settlement in reference to our anticipated decimal system of notation and currency; with which proposition I conclude my plea for the "Old Penny" and a "New Guinea."

APPENDIX, No. I.

Table for the Conversion of Sterling Pounds into Decimal Farthings or Mils, or Decimal Guineas into Sterling.

EXPLANATION.—Find the number in the black figures. If Sterling into Decimals, look to the right; if Decimal Guineas into Sterling, look to the left.

Value of the Numerals in the different Decimal places under a Guinea.																
Sterling.	Pounds or Guineas	Decimals.	Sterling.	Pounds or Guineas	Decimals.	Sterling.	Pounds or Guineas	Decimals.	1st place to right of £.				2d place to right.			
									£	s.	d.		£	s.	d.	
£	s. d.		£	s. d.		£	s. d.		£	s. d.		£	s. d.		£	s. d.
1	0 10	960	32	5 10	31	29 760	63	10 10	61	58 560	94	15 10	0 2	1 0	0 24	0 0 04
2	1 8	1 920	33	6 8	32	30 720	64	11 8	62	59 520	55	16 8	0 3	1 0	0 24	0 0 04
3	2 6	2 880	34	7 6	33	31 680	65	12 6	63	60 480	96	17 6	0 4	2 0	0 5 8	0 0 04
4	3 4	3 840	35	8 4	34	32 640	66	13 4	64	61 440	97	18 4	0 5	3 0	0 7 1	0 0 04
5	4 2	4 800	36	9 2	35	33 600	67	14 2	65	62 400	98	19 2	0 6	4 0	0 10 0	0 0 1
6	5 0	5 760	37	10 0	36	34 560	68	15 0	66	63 360	100	0 0	0 7	5 0	0 11 1	0 0 1
7	5 10	6 720	38	10 10	37	35 520	69	15 10	67	64 320	101	0 10	0 8	6 0	0 12 6	0 0 1 1 1
8	6 8	7 680	39	11 8	38	36 480	70	16 8	68	65 280	102	1 8	0 9	7 0	0 14 7	0 0 1 1 1
9	7 6	8 640	40	12 6	39	37 440	71	17 6	69	66 240	103	2 6	0 10	8 0	0 16 8	0 0 2 2 1
10	8 4	9 600	41	13 4	40	38 400	72	18 4	70	67 200	104	3 4	0 11	9 0	0 18 9	0 0 2 2 1
11	9 2	10 560	42	14 2	41	39 360	73	19 2	71	68 160	208	6 8	0 12	0 0	0 19 0	0 0 2 2 1
12	10 0	11 520	43	15 0	42	40 320	74	20 0	72	69 120	312	10 0	0 13	0 0	0 20 0	0 0 2 2 1
13	10 10	12 480	44	15 10	43	41 280	75	0 10	73	70 080	416	13 4	0 14	0 0	0 21 0	0 0 2 2 1
14	11 8	13 440	45	16 8	44	42 240	76	1 8	74	71 040	520	16 8	0 15	0 0	0 22 0	0 0 2 2 1
15	12 6	14 400	46	17 6	45	43 200	77	2 6	75	72 000	625	0 0	0 16	0 0	0 23 0	0 0 2 2 1
16	13 4	15 360	47	18 4	46	44 160	78	3 4	76	72 960	729	3 4	0 17	0 0	0 24 0	0 0 2 2 1
17	14 2	16 320	48	19 2	47	45 120	79	4 2	77	73 920	833	6 8	0 18	0 0	0 25 0	0 0 2 2 1
18	15 0	17 280	49	0 0	48	46 080	80	5 0	78	74 880	937	10 0	0 19	0 0	0 26 0	0 0 2 2 1
19	15 10	18 240	50	0 10	49	47 040	81	5 10	79	75 840	1 041	13 4	0 20	0 0	0 27 0	0 0 2 2 1
20	16 8	19 200	51	1 8	50	48 000	82	6 8	80	76 800	2 083	6 8	0 21	0 0	0 28 0	0 0 2 2 1
21	17 6	20 160	52	2 6	51	48 960	83	7 6	81	77 760	3 125	0 0	0 22	0 0	0 29 0	0 0 2 2 1
22	18 4	21 120	53	3 4	52	49 920	84	8 4	82	78 720	4 166	13 4	0 23	0 0	0 30 0	0 0 2 2 1
23	19 2	22 080	54	4 2	53	50 880	85	9 2	83	79 680	5 208	6 8	0 24	0 0	0 31 0	0 0 2 2 1
24	0 0	23 040	55	5 0	54	51 840	86	10 0	84	80 640	6 250	0 0	0 25	0 0	0 32 0	0 0 2 2 1
25	0 10	24 000	56	5 10	55	52 800	87	10 10	85	81 600	7 291	13 4	0 26	0 0	0 33 0	0 0 2 2 1
26	1 8	24 960	57	6 8	56	53 760	88	11 8	86	82 560	8 333	6 8	0 27	0 0	0 34 0	0 0 2 2 1
27	2 6	25 920	58	7 6	57	54 720	89	12 6	87	83 520	9 375	0 0	0 28	0 0	0 35 0	0 0 2 2 1
28	3 4	26 880	59	8 4	58	55 680	90	13 4	88	84 480	10 416	13 4	0 29	0 0	0 36 0	0 0 2 2 1
29	4 2	27 840	60	9 2	59	56 640	91	14 2	89	85 440						
30	5 0	28 800	61	10 0	60	57 600	92	15 0	90	86 400						
31	5 10		62	10 10	61		93	15 10								

APPENDIX, No. II.

Proposed Placard for exhibition in all places of business on the transition to a decimal system of accounts, if the Florin, Shilling, and Sixpence are not at same time appreciated in value.

Whereas from and after the — of — 185 , written accounts of all transactions, instead of being kept in the present money denomination of pounds, shillings, pence, and farthings, are thenceforth to be stated in farthings alone, with a view to a decimal system of accounts :—

TAKE NOTICE THAT CHARGES OF—

One farthing are to be set down thus,		001
A halfpenny equal to	2 farthings thus,	002
A penny,	4 " "	004
A "cent" or "tithe," a new coin,	10 " "	010
A threepenny piece,	12 " "	012
A fourpenny piece,	16 " "	016
A half Victoria, a new coin,	20 " "	020
A sixpence,	24 " "	024
A "Victoria," a new coin,	40 " "	040
A shilling,	48 " "	048
A florin,	96 " "	096
A half-crown,	120 " "	120
A crown,	240 " "	240
A half-sovereign,	480 " "	480
A sovereign or pound,	960 " "	960
A thousand farthings to be called a guinea, 20/10, being written,	} 1	000
And the sum of these, to show the system, being by simple addition,	} 3	073
Or three guineas, seven cents, three farthings.		

APPENDIX, No III.

Example of reduction of the present denomination into farthings, and its proof by another method.

Ex.—Reduce £3 17 10½ into farthings by school method.

$$\begin{array}{r} 20 \\ \hline 77 \\ 12 \\ \hline 934 \\ 4 \\ \hline \end{array}$$

Ans. 3,738 farthings,

or decimally 3||738; three thousand or guineas, 738 farthings; otherwise denominationally, if the *silver be appreciated*, three guineas, seven florins, three cents, eight farthings.

Proof.

$$\begin{array}{rcl} \text{Example,} & . & £3\ 17\ 10\frac{1}{2} \\ \text{Multiply by} & . & 8 \\ \hline & & £31\ 3\ 0 \\ \text{And by} & . & 12 \\ \hline & & £373\ 16\ 0 \end{array}$$

Then take half the amount of the shillings and place it as the unit to the sum of pounds, thus 3738, being apparent pounds, but actually the number of farthings in the original amount.

Note. The above proof is simply a multiplication by 960, the number of farthings in the present pound; the halving the shillings and placing them as the unit, it will be seen, is just a short way of working the last multiplication by 10, which changes the shillings into half their amount of pounds, and infallibly results in bringing the apparent pounds in correspondence with the number of farthings in any sum; and if we take the number of figures, it is a shorter process than the other.

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APPENDIX, No. IV.

Multiplication table to be learned for practice of conversion of any sum of decimal farthings under a guinea, at sight, into present denomination and coinage:—

1 farthing is	.	.	.	.	one farthing.
2 farthings are	.	.	.	.	one halfpenny.
3 "	.	.	.	.	one halfpenny farthing.
4 "	.	.	.	.	one penny.
5 "	.	.	.	.	one penny farthing.
6 "	.	.	.	.	one penny halfpenny.
7 "	.	.	.	.	one penny three farthings.
8 "	.	.	.	.	twopence.
9 "	.	.	.	.	twopence farthing.
10 or in the second decimal place	1	at	2½d.	twopence halfpenny.	
20	"	"	2	at 2½d.	fivepence.
30	"	"	3	at 2½d.	sevenpence halfpenny.
40	"	"	4	at 2½d.	tenpence.
50	"	"	5	at 2½d.	one shilling and a halfpenny.
60	"	"	6	at 2½d.	one shilling and threepence.
70	"	"	7	at 2½d.	one shilling and fivepence halfpenny.
80	"	"	8	at 2½d.	one shilling and eight pence.
90	"	"	9	at 2½d.	one shilling and tenpence halfpenny.
100 or in the third decimal place	1	at 2s. 1d.	two shillings and one penny.		
200	"	"	2	at 2s. 1d.	four shillings and twopence.
300	"	"	3	at 2s. 1d.	six shillings and threepence.
400	"	"	4	at 2s. 1d.	eight shillings and fourpence.
500	"	"	5	at 2s. 1d.	ten shillings and fivepence.
600	"	"	6	at 2s. 1d.	twelve shillings and sixpence.
700	"	"	7	at 2s. 1d.	fourteen shillings and sevenpence.
800	"	"	8	at 2s. 1d.	sixteen shillings and eightpence.
900	"	"	9	at 2s. 1d.	eighteen shillings and ninepence.
1000	"	one Guinea			twenty shillings and tenpence.

APPENDIX, No. V.

Table of the Price of Silver on 1st July of each year from 1841 to 1853, extracted from a recent work entitled "Victoria," by William Westgarth, Esq. of Melbourne.

1841.	1842.	1843.	1844.	1845.	1846.	1847.	1848.	1849.	1850.	1851.	1852.	1853.
5/0½	5/0	4/11½	4/11½	4/11	4/11	4/11½	4/11½	4/11½	4/11½	5/0½	5/0½	5/1½

Table of the Weekly Price of Standard Silver in bars per Ounce, for preceding three months of 1853, from the "Economist."

Sept. 3.	Sept. 10.	Sept. 17.	Sept. 24.	Oct. 1.	Oct. 8.	Oct. 15.	Oct. 22.	Oct. 29.	Nov. 5.	Nov. 12.	Nov. 19.	Nov. 26.
5/2½	5/2½	5/1½	5/1½	5/1½	No quotation.	5/1½	5/1½	5/1½	No quotation.	5/2½	5/2½	5/2½

Making the average price for these months within a fraction of 5s. 2d. per ounce, and rising at the end of the period.

Postscript.—During the interval which has elapsed betwixt the “reading” and publication of the foregoing paper, the question of a decimal system of notation and currency has excited considerable attention. Papers have been read on the subject before other literary and scientific societies. Various publications have emanated from the press, and articles bearing on the question have appeared in the *Times* and other newspapers and magazines. But perhaps the most important step has been the waiting of a deputation on the Chancellor of the Exchequer and President of the Board of Trade from the Decimal Coinage Association, to endeavour, through those ministers, to influence the Government, to issue coins of the tenth and hundredth of a florin, or in other words to make the *pound* “the unit of account.” In reply to these gentlemen, the Chancellor is reported to have said, “That before issuing those coins, it was necessary that the Government and the country should pretty well have made up their minds, not only that a decimal coinage should be adopted, but that the pound should be the unit forming the basis of it;” and that, “notwithstanding commissions and committees, it had not yet gone through any thing like that process of sifting which was necessary, before the Government could think of acting.” I think there can hardly be a question but that a decimal system would be a great benefit to the country; but how to get the country to “pronounce” upon it is the difficulty. As the country will never pronounce in its favour from mere *theoretical* knowledge of it, we must have it capable of being previously reduced to practice and experimented on, and therefore, in a country like Great Britain, the change must be *gradual* and *permissive*, not *sudden* or *compulsory*. But with the pound as the “basis,” it cannot be *permissive*, but must be *compulsory*. The issue of the unfortunate florin has not brought us a single step nearer to a decimal system—we merely regard it as a two shilling piece—we use it reluctantly; but we only use it at all, *because it can be used in harmony with the present system*. The case, however, is very different with its tenth and hundredth

parts, of which it is now proposed to follow out the introduction by coins of $2\frac{1}{2}$ ths of a penny and $\frac{1}{4}$ ths of a farthing. Suppose we had these coins to-morrow, what is to be done with them? The mere having them to look at would not introduce a decimal system. To do so they must be used, and to use them would not only introduce untellable inconvenience into books and accounts, and affect various other fixtures of value, but from introducing fractional calculations which it is the very object of a decimal system to do away with, would so disgust the people, that a man who happened to get one of the new coins would have as much difficulty in getting quit of it as of a *light* sovereign for *full* value. We have it in evidence that we cannot jump into a decimal system, as if we were putting off an old suit of clothes and on a new one; and at the end of the estimated twenty years of transition (a period of itself absolutely painful to look forward to), the country would be found as far from being ripe for the *imperative introduction* as it is now. The florin has brought us to the edge of the deep water, and we are now required to make the plunge without being sure whether we can swim or no; like the Irishman, the country may refuse to enter the water again till it knows how to swim, but there is only one way of acquiring that knowledge, viz., *by practice*. Now the penny is our most ancient British coin, and the pound must therefore have been a *consequence of it*. It is unfortunate that our forefathers did not think of making the pound to consist of 250 instead of 240 pence, in which case we should have had a decimal system some generations ago; but because they committed a blunder, surely a case has not been made out for "turning the tables" upon the *old* penny, as it were, and making a *new* penny the *consequence of the pound*, in which we would just make as great a mistake as our ancestors aforesaid. It appears to me to be a law of nature, that all ideas of value as of height proceed from a *low basis*; and we act upon this every day. When we begin to give our sons pocket money, which is just a practical teaching of monetary value and ideas, most parents will be found to begin with a penny, and if we were to give a boy who had never previously handled or spent money, a sovereign or pound, he

would not know well what to do with it ; or, if with the other blessings of civilization, we were bent upon introducing into some conquered island of the Pacific a monetary coinage, which, with the light we now have, we proposed should be decimal, how should we act ? We would probably find that the previous ideas of value ranged from a shell or a bead to a sheep or a bullock, but we surely would never think of decimally cutting up the animal, and basing the new coinage upon the smallest decimal piece of it ; or if we did so, and found its ratio of value to be $\frac{1}{10}$ ths of the shell or bead, would we not find a difficulty, not to say an impossibility, of imparting our ideas to the minds of the savages ?—whereas by the introduction of a coin exactly analogous to the bead or shell, the thing would be comparatively easy. It appears to me a most dangerous step to disturb the *basis* or *lowest* ideas of value to which any people have been accustomed, whatever may be done with the higher expressions. If, as I have said, in this country a decimal system must be *gradual* and *permissive*, in order to its being so, we have only to make it *demonstrable*, and capable of being practically experimented on, and we can do this not only without violence to our present system of currency and accounts, but with actual benefit to them, even supposing we were never to adopt the decimal system at all. If, in the preceding paper, I have been at all successful in showing the analogy or identity, *so far as it goes*, of our present non-decimal system with the highly lauded and simple decimal system of Portugal, we have only to make that analogy or identity *complete*, by the introduction of the coins which are wanting to complete it, and these are, a “Victoria” of 10 pence, a half Victoria of 10 half-pence, and a quarter Victoria of 10 half-farthings, which last, as a specific coin, might get the diminutive name of a “Victorine.” These coins, while completing our decimal scale, would harmonize with our present circulation, as a very slight examination will serve to prove. It will be kept in mind, that all the change that is necessary in accounting, is to do so in the simple denomination of farthings alone ; and this being understood, all calculations of addition, subtraction, multiplication, and division, are performed in *farthings alone*,

without thinking of other coins at all; and it is only when we come to the result, when we have actually to pay or receive an amount, that we require to think at all of what specific coins are required. Then we find that a "Victoria" added to a sovereign pays 1000 farthings, or any number of thousands. Keeping the $\frac{3}{4}$ ths in view, (which is much easier at *this end of the sum than at the lower*), we find that 25 sovereigns exactly liquidate 24,000 farthings, consequently $12\frac{1}{2}$ sovereigns do the same by 12,000; then $2\frac{1}{2}$ Victorias pay 100 farthings; 5, 200; $7\frac{1}{2}$, 300; and so on. Coming farther down, a quarter Victoria or "Victorine" pays 10; 2 (or a half Victoria) 20; $\frac{1}{4}$, 40; and so on. Then as to those new coins coming in as "change" with our present, we find that 24 Victorias change a sovereign, and 12 a half sovereign, that 3 Victorias change a half-crown, and are consequently equivalent to two shillings and sixpence; 6 change a crown, and consequently 5 shillings are equivalent to 6 Victorias. In payments, then, of any simple cumulative amount of farthings, after a short time little difficulty would be experienced; but the facility of transition is, that when even the slightest difficulty was experienced, we could with the greatest ease fall back upon the old system, without confusion or violence to the account. In Portugal, although the "milree" is *not a coin*, bank paper is all issued in *milrees*, and if our bank paper were issued in thousands of farthings, we should at once have an indicating system in all but the intermediate gradation of hundreds; but this hiatus would be of little inconvenience, for the beautiful simplicity of the system is, that whatever coin be indicated in any gradation, it is also indicated with a multiplication by 10 in the next higher; thus in the price of an ounce of gold, 3738 farthings, the 3 "Victorines" indicated in the second place are just 73 of the same coin in the next higher—the mind readily grasps the division of this by 4, showing it at once to be 18 Victorias and a quarter=15s. 2½d.; or by mentally multiplying the hundred figure by 5 and halving the product, the number of ten pence coins necessary to pay any number of hundreds is at once indicated; while to pay with our present coins, we have only to take the figure in the hundred place for pence, and double it for shillings; thus 700 farthings is just 14s. 7d.

I am enabled also to state from experience that the multiples of the sovereign even as a sum of farthings—1, 1||960 ; 2, 1||920 ; 3, 2||880 ; 4, 3||840 ; 5, 4||800 ; and so on—would speedily come to be recognised and recorded with the utmost facility, at least such is the case with the Portuguese *moidore*. If a visitor were to obtain money in Lisbon upon a letter of introduction or credit, it would be paid him in “moidores,” while it would be debited in “rees,” so that the system is still analogous to our pound being continued as a circulating coin ; and if teachers and others choose to experiment on such calculations, they will find them neither abstruse nor difficult, and a knowledge of them easily imparted. The introduction of these coins, then, besides making a decimal system *demonstrable, practicable, and convertible*, would also be a benefit to our *present* system, even were we to continue with it. At present we find the greatest difficulty in initiating foreigners into our monetary system, simply because we have few or no coins analogous to theirs as integers, and I think the *entente cordiale*, which is every day becoming greater betwixt Great Britain and other nations, should induce us to make an effort to remedy in some degree this deficiency. These new coins would eminently do so, for we would only have to place a Victoria before a Frenchman, and tell him that it is his own franc, with its half and quarter, and its multiples in the half-crown, crown, &c., and we have a complete coinage for the Frenchman. Then we would place 5 Victorias before an American, and tell him these make up his own dollar, with the half Victoria as its tenth, and the halfpenny its cent., and he at once has a key to our system. The Portuguese would be at home, in being told that the expression of all our coins was just a fifth part less than his own, and the same analogy would be found to hold with the coinage of many other foreign nations ; and this approximation of monetary value over the world would be conferring a benefit, from which Great Britain, hitherto too much wrapped in her own exclusiveness, ought not to stand aloof, for of course the converse advantage of *familiarity of coins* would be found by her own people in visiting foreign countries.

If, then, the “farthing unit,” on the *slight* evidence afforded on it before the committee, seems still so far to have attracted

their attention as to induce them to say of it (Report, p. 5) that in competition "with other proposals," it presented the greatest amount of advantage "*after the pound*," it may be that on further consideration and "sifting" of the subject, it will present such a preponderating amount of advantage as to overbalance the pound itself—the simple question being, not whether we shall keep accounts in farthings, for that we must do at any rate, either under its own name or that of "mil," but whether we can do *with the farthing we have*, or require to make a *new one*, with all the inconveniences which it would unavoidably entail, and a period of transition of which few who take part in the work may live to see the end.